

CLAIMS

What is claimed is:

1. An electromagnetic clutch for a compressor comprising:
a rotor which receives a driving force from a drive source;
an armature rotated integrally with a drive shaft of said compressor;
an electromagnetic coil for bringing said rotor into contact with said armature by generating an electromagnetic attractive force due to the excitation of said coil to transmit said driving force to said drive shaft and for separating said rotor from said armature by terminating the excitation of said coil to interrupt the transmission of said driving force to said drive shaft;
and
a detection means for detecting an excessive increase in temperature, said detection means being provided via a first electric circuit separate from a second electric circuit of said electromagnetic coil.
2. The electromagnetic clutch for a compressor of claim 1, wherein said detection means detects an excessive increase in temperature ascribed to slippage between said rotor and said armature when said rotor and said armature are brought into contact with each other.
3. The electromagnetic clutch for a compressor of claim 1, wherein said detection means detects an excessive increase in temperature ascribed to a temperature increase of compressed fluid discharged from said compressor.
4. The electromagnetic clutch for a compressor of claim 1, wherein said detection means comprises a temperature switch or a temperature fuse, or both.
5. The electromagnetic clutch for a compressor of claim 1, wherein an air conditioning system for a vehicle comprises said compressor, and said detection means is connected to an air conditioning control unit for said air conditioning system.
6. The electromagnetic clutch for a compressor of claim 5, wherein when said detection means detects an excessive increase in temperature, operation of said air conditioning system is stopped.
7. The electromagnetic clutch for a compressor of claim 1, wherein said compressor is a hybrid compressor driven by two separate drive sources, including an electric motor incorporated into said compressor, and when said detection means detects an excessive increase in temperature, driving by or activation of said electric motor is terminated.

8. A vehicle comprising an electromagnetic clutch for a compressor including:
a rotor which receives a driving force from a drive source;
an armature rotated integrally with a drive shaft of said compressor;
an electromagnetic coil for bringing said rotor into contact with said armature by an electromagnetic attractive force due to the excitation of said coil to transmit said driving force to said drive shaft and for separating said rotor from said armature by terminating the excitation of said coil to interrupt the transmission of said driving force to said drive shaft; and
a detection means for detecting an excessive increase in temperature, said detection means being provided via a first electric circuit separate from a second electric circuit of said electromagnetic coil.
9. The vehicle of claim 8, wherein said detection means detects an excessive increase in temperature ascribed to slippage between said rotor and said armature when said rotor and said armature are brought into contact with each other.
10. The vehicle of claim 8, wherein said detection means detects an excessive increase in temperature ascribed to a temperature increase of compressed fluid discharged from said compressor.
11. The vehicle of claim 8, wherein said detection means comprises a temperature switch or a temperature fuse, or both.
12. The vehicle of claim 8, wherein in an air conditioning system for the vehicle comprise said compressor, and said detection means is connected to an air conditioning control unit for said air conditioning system.
13. The vehicle of claim 12, wherein when said detection means detects an excessive increase temperature, operation of said air conditioning system is terminated.
14. The vehicle of claim 8, wherein said compressor is a hybrid compressor driven by two separate drive sources, including an electric motor incorporated into said compressor, and when said detection means detects an excessive increase in temperature, driving by or activation of said electric motor is terminated.